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10/553,428

11/13/2006

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EXAMINER

HOLLOWAY, JASON R

ART UNIT

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3633

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/553,428 | Applicant(s) BEELE, JOHANNES ALFRED | |
| | Examiner JASON HOLLOWAY | Art Unit 3633 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 6, 14, 15 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>18 October 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 6, 14-15 and 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 22 July 2009.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5, 7-13 and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claim 5, the phrases "preferably" and "for instance" render the claim indefinite because it is unclear whether the limitations following the phrases are part of the claimed invention. See MPEP § 2173.05(d).

5. Regarding claim 8, it would be unclear to one of ordinary skill in the art with is entailed by the recitation "fixed virtually fittingly within a volume." Appropriate clarification is needed.

6. Claims 7-13 and 16-17 depend from rejected claim 5 and therefore carry the same deficiency. Accordingly, the claims will be examined "as best understood."

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5, 7-10, 13 and 16-17, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cordts et al (US 2004/0093814) in view of Atkinson et al. (GB 2 226 033).

Regarding claim 1, Cordts teaches a fire-resistant material (fire stop material 30) which is a crust-forming fire-retardant material [paragraphs [0030 and 0031] teach the fire stop material is a graphite intumescent material, the examiner construes the expansion of this intumescent material forms what can be considered to one of ordinary skill in the art to be a "crust" when the material expands).

Cordts further teaches a foam with a closed cell structure is used in the system to prevent smoke from entering through a through-penetration 6 (see para [0038]).

However, Cordts fails to explicitly disclose the fire resistant material is based on an elastomeric foam with a substantially closed cell structure in which foam having a pH neutralized graphite material are incorporated. Since Cordts does use a closed cell foam material to prevent smoke from entering the through penetration 6, it would have been obvious to one of ordinary skill in the art to and from the teaching of Cordts to use such a foam since the closed cell foam would provide the necessary material properties to prevent smoke penetration.

Atkinson teaches a flame resistant material in which the fire resistant material is based on an elastomeric foam (see page 5 lines 1-3, polyurethane foam is a known elastomeric substance, and it would be obvious to use a polyurethane foam having a closed cell structure for the reasons noted above by the examiner) and the foam has a pH neutralized graphite material incorporated in it (see page 5 lines 4-6 of Atkinson).

Therefore, from the teaching of Atkinson, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the intumescent fire stop material of the teaching of Cordts to include the teaching of a foam based graphite neutralized intumescent material as disclosed in Atkinson since the polyurethane foam based intumescent material would be more cost effective than using the graphite based intumescent material of Cordts. The examiner would like to further point out that changing the type of intumescent material would be a simple design choice to one of ordinary skill in the art. Many different intumescent materials are well known and it would be a simple substitution to change the graphite based intumescent material of Cordts with a foam based intumescent material, like that of Atkinson.

Regarding claim 2, Cordts teaches the flame extinguishing material has been selected from poly ammonium phosphate and melamine phosphate (Cordts teaches a suitable endothermic compound could be magnesium ammonium phosphate hexahydrate in para [0033]).

Regarding claim 3, Cordts teaches the graphite material expands at a temperature higher than 200 degrees C (para [0033] states suitable endothermic materials include inorganic compounds that provide endothermic reaction or phase

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change without exothermic decomposition or combustion between 90 and 1500 degrees Celsius, since the suitable reaction temperature range falls well within the claimed range, the claim limitation is met).

Regarding claim 4, Cordts teaches the material is in the form of a plate-shaped or beam-shaped element (as illustrated in figure 3 of Cordts, the material 30 is plate shaped).

Regarding claims 5 and 17, the combination of Cordts and Atkinson teaches a system and method for sealing off, at least during a fire taking place adjacent a wall (walls 8 of figure 3 of Cordts), in a virtually entirely flame-tight manner and preferably also smoke-tight manner (see para [0020] of Cordts for flame-tight and smoke-tight properties),

an opening extending through this wall (opening 6 of figure 3 of Cordts), through which a transporting device comprising for instance a cable, duct or pipe has been fed (a duct having cables 12a passing through wall 8 is illustrated in figure 3 of Cordts), the system being provided with elements manufactured from a fire-resistant material which expands under the influence of temperature increase (via intumescent materials of both Cordts and Atkinson described above), characterized in that the elements are manufactured from the foam according to claim 1 (see rejection to claim 1 above for the material as taught by the combination of Cordts and Atkinson).

Regarding claim 7, Cordts teaches the system is designed such that the elements can be fixed in a self-clamping manner in the opening or in a casing thereof through mutual contact, contact with an inner wall of the opening or contact with the

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transporting device (as described in para [0029] of Cordts, the intumescent material is held in place by contacting the cables 12a and by contacting the walls, thus the examiner construes this meets the definition of the "self clamping" limitation).

Regarding claim 8, Cordts teaches the system is capable of being fixed virtually fittingly within a volume which is bounded by a first outer surface of the wall and a second outer surface of the wall located opposite the first outer surface (as illustrated in figure 3 of Cordts, the intumescent material 30 is disposed in a volume between the outer and inner portions of the walls 8).

Regarding claims 9 and 16, Cordts teaches after the system has been fixed in the opening (the examiner construes the opening is the same thing as a feed through of claim 16), parts of the opening which are free from the transporting device are sealed off by the system (Cordts teaches the entire system is sealed off in para [0030 and 0038] and the sealed system is illustrated in figure 2).

Regarding claim 10, the combination of Cordts and Atkinson teaches the system is designed such that after fixation in the opening, the system is ready for use (it would be obvious to one of ordinary skill in the art that once the system is put in place, the system is ready for use, the examiner construes once the system of Cordts and Atkinson is in place, it is ready to be used).

Regarding claim 13, Cordts teaches at least one of the elements is of plate-shaped design (as illustrated in figure 3 of Cordts, the material 30 is plate shaped).

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9. Claim 11, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Cordts et al. (US 2004/0093814) in view of Atkinson et al. (GB 2 226 033) and further in view of Fay (6,484,463).

Regarding claim 11, the combination of Cordts and Atkinson teaches at least one of the elements is plate shaped (via plate shaped intumescent material 30 of figure 3 of Cordts), however, the combination of Cordts and Atkinson fails to explicitly disclose the plate is provided with a line of weakening, the at least one element being detachable by breaking along the line of weakening in the plate-shaped material.

Fay teaches fibrous insulation panels which are plate shaped and in which lines of weakness (cuts 34, 36 and 38 of figure 2 of Fay are weakened lines) and the at least one element being detachable by breaking along the line of weakening in the plate-shaped material (as described in the abstract).

Therefore, from the teaching of Fay, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the plate members of the combination of Cordts and Atkinson to include equally spaced cuts like those in the teaching of Fay in order to enable the installer to easily change the size of the intumescent plate depending on the size of the spacing between the walls needed to be filled.

10. Claim 12, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Cordts et al (US 2004/0093814) in view of Atkinson et al. (GB 2 226 033) and further in view of Beele (5,344,106).

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Regarding claim 12, the combination of Cordts and Atkinson fails to explicitly disclose at least one of the elements is of tube-shaped design.

Beele teaches a fire resisting cable system in which tube shaped fire resistant intumescent members 12 having thermally expanding layers 14 and 15 are disposed.

Therefore, from the teaching of Beele, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the plate-shaped intumescent layers of the combination of Cordts and Atkinson to include the teaching of adding tube shaped intumescent layers from the teaching of Beele in order to provide additional fire stopping abilities in between the cables thus further protecting the building from fire damage.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached 892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON HOLLOWAY whose telephone number is (571) 270-5786. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JASON HOLLOWAY
Examiner
Art Unit 3633

JH

/Brian E. Glessner/
Primary Examiner, Art Unit 3633